

Answers to Questions 1-3.

**1. Which species, populations, and life stages are most sensitive to diversion effects under no action and alternatives 1, 2, and 3? When and where are they most affected?**

**No Action:** Larvae and young juveniles are the most sensitive life stages. These life stages are present in the spring and early summer. The major effects occur in the central and south Delta where altered hydrodynamics and entrainment are important. As delta smelt grow, they migrate downstream to brackish water areas in the fall and winter and are considered less vulnerable to diversion effects. Pre-spawning adults migrating back into freshwater to spawn in the late winter and early spring become vulnerable to entrainment effects once again.

**Alternative 1:** The same as No Action.

**Alternative 2:** Larvae and young juveniles are still the most sensitive stages and are still vulnerable at the same times. The major changes in hydrodynamics anticipated with Alternative 2 are believed to be a negative factor for all life stages of delta smelt, but especially these sensitive stages. These negative effects are expected to be most severe in the eastern and central Delta.

**Alternative 3:** Alternative 3 was given high benefit because of its positive effects on returning Delta hydrodynamics to a more "natural" condition, meaning the rivers and most channels maintain positive outflows at most times and places. Positive benefits for delta smelt may be high compared to other species because it is the only species to complete its entire life cycle in the estuary.

**2. Can diversion effects in the South Delta be offset by habitat improvements and other common program actions?**

No, common program actions have very uncertain effects for delta smelt but it seems unlikely that the positive benefits will outweigh the entrainment and hydrodynamic effects.

**3. To what extent can alternatives 1, 2, and 3 offset diversions effects as presently configured?**

**Alternative 1:** Little effect.

**Alternative 2:** Makes things much worse.

**Alternative 3:** Makes things better.